

venous thromboembolism after fractured hips, as shown in the PEP study, should not be confused with its ineffectiveness after major joint replacement.

The earlier collaborative overview of randomised trials of antiplatelet therapy, carried out by the same group as the PEP study, included about 1000 patients undergoing elective orthopaedic surgery, less than half of whom were given solely aspirin.⁵ If the protective effect of aspirin claimed by this earlier overview was real a trial four times larger should have confirmed the earlier results, but this did not happen. The apparent lack of benefit from aspirin in the subgroup with arthroplasties in the PEP study may well reflect different pathogenetic factors after joint replacement.

Local thrombin generation in areas of stasis is thought to be the major stimulus to venous thrombogenesis, and suppressing this generation is the primary aim of chemical thromboprophylaxis.⁹ The effect of aspirin (500 mg by month) on thrombin generation in blood is roughly equal to that of a concentration of 0.03 U/ml of heparin.¹⁰ This observation may explain the effectiveness of aspirin in patients with moderate hypercoagulability. Nevertheless, the overall effect of aspirin on thrombin generation is modest, and for the intense hypercoagulability associated with major cancer and orthopaedic surgery aspirin alone is unlikely to be sufficiently protective.

Anticoagulants used over the years as prophylaxis against venous thromboembolism include warfarin, heparin, and low molecular weight heparin, and all have been shown to be effective. Unlike in the United Kingdom, the consensus in north America supports routine anticoagulation in patients undergoing knee or hip surgery: low molecular weight heparin or warfarin for at least 10 days is recommended, with extended prophylaxis for patients still bedridden after 10 days.¹ The disadvantage of any anticoagulant is the risk of bleeding. Most of the bleeding associated with anticoagulant therapy is, however, minor, with the incidence of major bleeding around 1%.¹¹ This seems an acceptable price to pay to avoid the morbidity and mortality associated with venous thromboembolism. Warfarin and heparin need careful monitoring by the laboratory, whereas low molecular weight heparin does not. This is an advantage for use outside hospital, where self administered low molecular weight heparin has been shown to be both feasible and cost effective.¹²

Thus evidence from numerous clinical trials indicates that some form of active prophylaxis is required after major joint replacement. Although aspirin has an important ancillary role, particularly in patients unsuited for anticoagulants, there is no convincing evidence that it is sufficiently thromboprophylactic on its own after major joint replacement. Anticoagulation therefore remains the single most effective way of preventing postoperative venous thromboembolism after hip and knee replacement.

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Abdominal obesity and the “hypertriglyceridaemic waist” phenotype

It's probably not yet time to implement screening

Clinical review p 716

Generalised obesity, measured by body mass index (weight (kg)/(height (m)²)), is one of the major causes of ill health in western society. However, abdominal obesity—which is closely associated with intra-abdominal fat and measured either by waist circumference or waist:hip ratio—predicts subsequent coronary artery disease better than body mass index.¹ Furthermore, obesity, particularly abdominal obesity, is associated with insulin resistance, and

predicts the development of type 2 diabetes.^{2,3} On p 716 Després et al argue that waist circumference should be routinely measured in primary care and used to identify people with abdominal obesity, on whom efforts to reduce obesity should be targeted.⁴

High waist measurement may be useful for screening since (a) height contributes little to the variance, (b) it accurately predicts obesity and high waist:hip ratio,⁵ and (c) it predicts traditional coronary artery

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disease risk factors.⁵ High waist and fasting triglyceride measurements—the hypertriglyceridaemic waist—is a marker for the “metabolic syndrome,” which is associated with the traditional risk factors of hypertension, hyperglycaemia, low high density lipoprotein (HDL) cholesterol and the non-traditional risk factors of insulin resistance, hyperinsulinaemia, raised apolipoprotein B, and small dense low density lipoprotein (LDL) cholesterol particles. A triad of non-traditional risk factors (high apolipoprotein B, hyperinsulinaemia, small dense LDL cholesterol) strongly predicted coronary artery disease in a prospective cohort (odds ratio 5.2) even after traditional risk factors were controlled for.⁶ Furthermore, waist circumference is associated with hyperinsulinaemia and high apolipoprotein B, and hypertriglyceridaemia is associated with dense LDL cholesterol particles.⁷ The combination—that is, the hypertriglyceridaemic waist phenotype—is also associated with coronary artery disease (odds ratio 3.6),⁷ hence Després et al’s argument that waist measurement is a vital sign and should be routinely documented.⁴ However, before accepting exhortations to change routine practice some important questions need answering.

How much extra information do non-traditional risk factors provide? The prospective cohort study had few cases (85) and hence wide confidence intervals.⁶ The effect of other important risk factors, including left ventricular hypertrophy, family history, and social class, were not clarified.⁶ Furthermore, the risk of coronary artery disease from the hypertriglyceridaemic waist phenotype (odds ratio 3.6)⁷ is similar to the estimate for traditional risk factors.⁶ Thus additional large prospective studies are needed to clarify the utility of these non-traditional risk factors.

Is triglyceride concentration an independent risk factor? Triglyceride is strongly and inversely related to HDL cholesterol, and the traditional ratio of cholesterol:HDL cholesterol predicts LDL particle size similarly to triglyceride concentrations (respectively $r = -0.59$; $r = -0.54$).⁸ Nevertheless, a meta-analysis of prospective studies suggests triglyceride concentration probably is an independent risk factor for coronary artery disease.⁹ A fasting triglyceride of >2.3 mmol/l roughly doubles the risk of myocardial infarction.¹⁰ However, routinely obtaining fasting triglyceride concentrations—which by contrast are not necessary for HDL and LDL cholesterol—may be difficult in primary care. The importance of triglyceride concentration also requires clarification in young men, women, and groups such as South Asians among whom abdominal obesity is prevalent.

How useful is waist measurement as a screening tool? The positive predictive value of risk factors for predicting cardiovascular disease is less than 60%—that is, over 40% of people will not have a risk factor for cardiovascular disease,⁵ although many will subsequently develop type 2 diabetes.^{2,3} The reliability of waist measurement in primary care, including the optimal position of the tape measure, is also unclear.

Is waist measurement to provide patients with information about their health risks or to guide cost effective treatment? Patients do want information about their health risks and ways of reducing these risks if this is done sensitively. However, most patients who are overweight know that they are and that this carries risks.¹¹ Whether having these risks confirmed

and receiving simple advice makes any difference is unclear, but evidence for such simple approaches is sparse.¹² Is more intensive treatment of obesity likely to be effective? A systematic review of diverse treatments suggested that surgical treatment for persistent morbid obesity (body mass index >40) is likely to be effective, as are behavioural treatments, diet and exercise regimens, and drug treatments.¹³ However, most studies were not based in primary care, used volunteers, and concentrated on weight alone and not on risk factors for coronary artery disease. There are also concerns about methodological issues, cost effectiveness, and the training and resource implications for primary care. Finally, most studies document weight regain in the longer term.¹³ A similar range of considerations apply to recent trials of drug treatments.¹⁴ Clearly, better evidence relevant to primary care is needed before we firmly advocate treatment regimes for obesity.

This leaves the primary healthcare team in a dilemma. Yes, both body mass index and abdominal obesity are important, the measurement of fasting triglyceride concentrations may improve estimation of risk, and high waist circumference may identify those at highest risk of coronary artery disease and type 2 diabetes. Thus it would seem prudent to provide information and advice about weight reduction as part of overall management of risk factors to patients with large waists and multiple risk factors for coronary artery disease. Primary healthcare teams should also be aware of the potential to treat patients with high triglyceride and low HDL cholesterol concentrations: in such patients fibrates provide effective secondary prevention (number needed to treat for five years = 20), even when LDL cholesterol is low.¹⁵ However, until there is better evidence from primary care it is difficult to support the routine documentation of waist circumference in all patients.

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Reforming the GMC

Current proposals make a muddle of the possibilities for radical change

The consultation paper *Protecting Patients: A Summary Consultative Document*, published this week by the General Medical Council (GMC), Britain's licensing body for doctors, sets out options for reform under two main headings: the GMC's structure, constitution, and governance; and its procedures for dealing with allegations against doctors.¹ The proposed reforms follow harsh criticism from the public, government, and doctors that the GMC is, among other things, unwieldy, slow, defensive, and constrained in its powers.

The GMC currently consists of a council with 104 members, including 25 lay members. Under the GMC's preferred model for reform key decisions would be made by a new executive board of 20-25 members (60% medical and 40% lay). The board would be elected from, and accountable to, a wider council of around 80 members, equally split between medical and lay members. A lay chair would oversee the council, while a medical president would preside over the executive board.

A small board with statutory powers should enable the GMC to become more decisive and responsive. It meets the government's tests for reform: smaller more transparent bodies acting with greater public involvement.² It is also in line with best practice for the corporate sector³ and with the new Nursing and Midwives Council (NMC) and proposed Health Professionals Council (HPC).^{4, 5}

So far so good. But *Protecting Patients* confuses the picture with three possible approaches to reform. The first is the government's favoured model of relying solely on an executive board, but a politically unwise GMC dismisses this out of hand. The other two approaches both include a board and a council. But the GMC gets caught up on arguments about the exact division of powers between the two. For example, should the council hold all the powers and delegate action to the smaller board, or should the smaller board hold those powers but be accountable to the wider council—as the GMC prefers. The trouble is that this debate distracts attention from the real need to jointly address the concerns of both government and profession. How much more astute it would have been to focus minds on how the GMC's preferred model squares government requirements with the profession's need for representation.

The second part of *Protecting Patients* outlines options for reforming the way the GMC handles complaints against doctors. The current system is criticised

for being complex, creating delays, and lacking a full range of findings. To reduce duplication the GMC proposes to merge the early stages of the current procedures where decisions are made about whether the complaint should proceed and if so which procedures it should go through—health, performance, or conduct. Under its proposals, a new committee would investigate cases at an earlier stage and have greater flexibility to ensure complaints are handled in the most appropriate way.

The GMC also proposes introducing a new lower finding against a doctor—professional misconduct. This would sit alongside the existing and more substantive charge of serious professional misconduct and could be applied when serious professional misconduct is not proved. Supporters of this move argue that it could allay criticisms that doctors whose conduct is poor but not bad enough to constitute serious professional misconduct fall through the existing system.

However, this reform is neither logical nor full hearted. The fact that the new lower finding would apply only in cases where serious professional misconduct is not proved limits its application. Should it not be a charge in its own right? In addition, the sanctions proposed for this new finding may be insufficient: the consultation paper talks imprecisely of placing a reprimand on the doctor's file without proposing clear accountability for action.

At present the GMC acts as judge, jury, and prosecutor. *Protecting Patients* makes a strong case for separating prosecution and judgment. It is not only lawyers who recognise the more robust and fair approach such a separation could bring, such as improving the confidence of both the public and the profession in the work of the GMC. However, the GMC's preference for retaining both functions within its overall ambit, behind proverbial "Chinese walls," is an example of the GMC grasping a weakened version of a bold idea.

Reform of the GMC represents piecemeal change to the wider regulatory system. In places *Protecting Patients* mentions (if only in passing) the complaints procedures, annual appraisal, clinical governance, and the GMC's own creature—revalidation. It is widely acknowledged there is a need for clarity over how accountability for public protection should be shared across these complex professional and managerial systems.⁶ It is not the GMC but this wider system that really protects the public—though at present it is not